THE ASTROPHYSICAL JOURNAL

Founded in 1895 by George E. Hale and James E. Keeler

ROBERT C. KENNICUTT, JR.
Editor-in-Chief
Steward Observatory
University of Arizona

CHRISTOPHER SNEDEN
Letters Editor
University of Texas

JAMES W. LIEBERT
Associate Editor-in-Chief
Steward Observatory
University of Arizona

JOHN SCALO
Deputy Letters Editor
University of Texas

JULES P. HALPERN
Associate Letters Editor
Columbia University

ANNEILA I. SARGENT
Associate Letters Editor
California Institute of Technology

JOSEPH I. SILK
Associate Letters Editor
University of California, Berkeley

AAS PUBLICATIONS BOARD

SUMNER STARRFIELD (2002–2005), *Chairperson*
Arizona State University

PATRICK OSMER (2002–2004)
Ohio State University

JANE C. CHARLTON (2002–2004)
Penn State University

MICHAEL F. A'HEARN (2001–2004)
University of Maryland

JOSEPH CASSINELLI (2004–2007)
University of Wisconsin

RICHARD GREEN (2004–2007)
National Optical Astronomy Observatory

JUDITH KARPEN (2003–2006)
Naval Research Laboratory

Publication Director: JULIE STEFFEN
Publication Manager: KERRY KROFFE
Production Manager: CAROLYN CHMIEL
Chief Manuscript Editor: ELIZABETH HUYCK
Manuscript Editors: THAD A. DORIA, PAUL RUICH, ERIC SHUTT, ROCHELLE COHEN LODDER, JEREMY HORSEFIELD, KERRY TUPPER, ALISON COMPTON, ED MARTIN, BRIAN ROBINSON, LAURIE THRASHER, ERICA GRIFFIN, AMY VAN STEE, JESSICA SENTERS LAW, JAMES ELLIS, ERIC GREGERSEN, DAVID JOHNSON, ELIZABETH SCHAEFER, AND PAUL OGILVIE
Production Staff: CINDY GARRETT, CECILIA HILGEMAN, ANJELICA SLOAN, STEPHANIE NORFLEET, LUKE JENSEN, ANNIE NISULA, CHRISTOPHER ROGALA, AND TAMARA GHATTAS
Austin Editorial Office: ELIZABETH M. KORVES AND KEVIN BECK

VOLUME 603, PART 2
2004 MARCH 1 AND MARCH 10

PUBLISHED BY THE UNIVERSITY OF CHICAGO PRESS FOR
THE AMERICAN ASTRONOMICAL SOCIETY

© 2004 BY THE AMERICAN ASTRONOMICAL SOCIETY. ALL RIGHTS RESERVED.
PUBLISHED THREE TIMES A MONTH

COMPOSED BY THE UNIVERSITY OF CHICAGO PRESS, CHICAGO, ILLINOIS, U.S.A.
PRINTED BY CAPITAL CITY PRESS
MONTPELIER, VERMONT, U.S.A.

THE ASTROPHYSICAL JOURNAL LETTERS

CONTENTS OF VOLUME 603, PART 2

2004 MARCH 1, NUMBER 1

	Page
THE HIGH-ENERGY TAIL OF GRB 941017: COMPTONIZATION OF SYNCHROTRON SELF-ABSORBED PHOTONS Ⓔ *Asaf Pe'er and Eli Waxman*	L1
THE DISCOVERY OF AN EVOLVING DUST-SCATTERED X-RAY HALO AROUND GRB 031203 Ⓔ *S. Vaughan, R. Willingale, P. T. O'Brien, J. P. Osborne, J. N. Reeves, A. J. Levan, M. G. Watson, J. A. Tedds, D. Watson, M. Santos-Lleó, P. M. Rodríguez-Pascual, and N. Schartel*	L5
BRIGHTNESS SUPPRESSION OF RELATIVISTIC RADIO JETS OF QUASARS: THE ROLE OF THE LOWER ELECTRON ENERGY CUTOFF *Gopal-Krishna, Peter L. Biermann, and Paul J. Wiita*	L9
X-RAY AND RADIO EMISSION FROM ULTRAVIOLET-SELECTED STAR-FORMING GALAXIES AT REDSHIFTS $1.5 \leq z \leq 3.0$ IN THE GOODS-NORTH FIELD *Naveen A. Reddy and Charles C. Steidel*	L13
A HUGE DROP IN THE X-RAY LUMINOSITY OF THE NONACTIVE GALAXY RX J1242.6−1119A, AND THE FIRST POSTFLARE SPECTRUM: TESTING THE TIDAL DISRUPTION SCENARIO *Stefanie Komossa, Jules Halpern, Norbert Schartel, Günther Hasinger, Maria Santos-Lleo, and Peter Predehl*	L17
JET EVOLUTION, FLUX RATIOS, AND LIGHT-TRAVEL TIME EFFECTS *James C. A. Miller-Jones, Katherine M. Blundell, and Peter Duffy*	L21
THE COUNTERSTREAMING INSTABILITY IN DWARF ELLIPTICAL GALAXIES WITH OFF-CENTER NUCLEI *Sven De Rijcke and Victor P. Debattista*	L25
LIGHT AND HEAVY COSMIC-RAY MASS GROUP ENERGY SPECTRA AS MEASURED BY THE MAKET-ANI DETECTOR *A. Chilingarian, G. Gharagyozyan, G. Hovsepyan, S. Ghazaryan, L. Melkumyan, and A. Vardanyan*	L29
CONSTRAINTS ON A PUTATIVE PULSAR IN SN 1987A *H. Ögelman and M. A. Alpar*	L33
THE THERMAL EVOLUTION FOLLOWING A SUPERBURST ON AN ACCRETING NEUTRON STAR *Andrew Cumming and Jared Macbeth*	L37
AN OBSERVATIONAL DIAGNOSTIC FOR ULTRALUMINOUS X-RAY SOURCES *V. Kalogera, M. Henninger, N. Ivanova, and A. R. King*	L41
KH 15D: GRADUAL OCCULTATION OF A PRE–MAIN-SEQUENCE BINARY *Joshua N. Winn, Matthew J. Holman, John A. Johnson, Krzysztof Z. Stanek, and Peter M. Garnavich*	L45
TRACING THE SHOCK PRECURSORS IN THE L1448-mm/IRS 3 OUTFLOWS *I. Jiménez-Serra, J. Martín-Pintado, A. Rodríguez-Franco, and N. Marcelino*	L49
THE EVOLUTION OF IRRADIATED PLANETS: APPLICATION TO TRANSITS Ⓔ *G. Chabrier, T. Barman, I. Baraffe, F. Allard, and P. H. Hauschildt*	L53
EVIDENCE OF MAGNETIC RECONNECTION ALONG CORONAL HOLE BOUNDARIES *M. S. Madjarska, J. G. Doyle, and L. van Driel-Gesztelyi*	L57
ON THE SELF-SIMILARITY OF UNSTABLE MAGNETIC DISCONTINUITIES IN SOLAR ACTIVE REGIONS *Loukas Vlahos and Manolis K. Georgoulis*	L61
INSTRUCTIONS TO AUTHORS OF LETTERS, AND ADDITIONAL USEFUL INFORMATION	*Inside Back Cover*
INSTRUCTIONS FOR ELECTRONIC MANUSCRIPT SUBMISSION	*Back Cover*

2004 MARCH 10, NUMBER 2

	Page
THE SEARCH FOR GALAXY CLUSTERING AROUND A QUASAR PAIR AT $z = 4.25$ FOUND IN THE SLOAN DIGITAL SKY SURVEY *Masataka Fukugita, Osamu Nakamura, Donald P. Schneider, Mamoru Doi, and Nobunari Kashikawa*	L65

THE EVOLUTION OF THE ULTRALUMINOUS INFRARED GALAXY POPULATION FROM REDSHIFT 0 TO 1.5 L69
L. L. Cowie, A. J. Barger, E. B. Fomalont, and P. Capak

THE NEAR-INFRARED LUMINOSITY FUNCTION OF GALAXIES IN CLOSE MAJOR-MERGER PAIRS AND THE MASS DEPENDENCE OF THE MERGER RATE L73
C. K. Xu, Y. C. Sun, and X. T. He

THE GASEOUS TRAIL OF THE SAGITTARIUS DWARF GALAXY L77
M. E. Putman, C. Thom, B. K. Gibson, and L. Staveley-Smith

THE DISCOVERY OF AN ANOMALOUS SUBGIANT BRANCH IN THE COLOR-MAGNITUDE DIAGRAM OF ω CENTAURI (E) L81
Francesco R. Ferraro, Antonio Sollima, Elena Pancino, Michele Bellazzini, Oscar Straniero, Livia Origlia, and Adrienne M. Cool

A RADIO OUTBURST NEARLY COINCIDENT WITH THE LARGE X-RAY FLARE FROM SAGITTARIUS A* ON 2002 OCTOBER 3 L85
Jun-Hui Zhao, R. M. Herrnstein, G. C. Bower, W. M. Goss, and S. M. Liu

NONLINEAR RESONANCE IN THE ACCRETION DISK OF A MILLISECOND PULSAR (E) L89
W. Kluźniak, M. A. Abramowicz, S. Kato, W. H. Lee, and N. Stergioulas

RESONANCE IN FORCED OSCILLATIONS OF AN ACCRETION DISK AND KILOHERTZ QUASI-PERIODIC OSCILLATIONS L93
William H. Lee, Marek A. Abramowicz, and Włodek Kluźniak

ACCURATE X-RAY POSITION OF THE ANOMALOUS X-RAY PULSAR XTE J1810−197 AND IDENTIFICATION OF ITS LIKELY INFRARED COUNTERPART L97
G. L. Israel, N. Rea, V. Mangano, V. Testa, R. Perna, W. Hummel, R. Mignani, N. Ageorges, G. Lo Curto, O. Marco, L. Angelini, S. Campana, S. Covino, G. Marconi, S. Mereghetti, and L. Stella

CONSTRAINTS ON THE FORMATION OF PSR J0737−3039: THE MOST PROBABLE ISOTROPIC KICK MAGNITUDE L101
B. Willems and V. Kalogera

THE INTERSTELLAR RUBIDIUM ISOTOPE RATIO TOWARD ρ OPHIUCHI A L105
S. R. Federman, David C. Knauth, and David L. Lambert

EVIDENCE FOR AN INTERSTELLAR ORIGIN OF STELLAR SHELLS L109
Helmut A. Abt

A CIRCUMSTELLAR DISK IN A HIGH-MASS STAR-FORMING REGION (E) L113
Michele R. Pestalozzi, Moshe Elitzur, John E. Conway, and Roy S. Booth

A CORONAL THICK-TARGET INTERPRETATION OF TWO HARD X-RAY LOOP EVENTS (E) L117
Astrid M. Veronig and John C. Brown

A NEW SOLAR BURST SPECTRAL COMPONENT EMITTING ONLY IN THE TERAHERTZ RANGE L121
Pierre Kaufmann, Jean-Pierre Raulin, C. G. Giménez de Castro, Hugo Levato, Dale E. Gary, Joaquim E. R. Costa, Adolfo Marun, Pablo Pereyra, Adriana V. R. Silva, and Emilia Correia

DETECTION OF POLARIZATION FROM THE $E\ ^1\Pi$–$A\ ^1\Pi$ SYSTEM OF FeH IN SUNSPOT SPECTRA L125
A. Asensio Ramos, J. Trujillo Bueno, and M. Collados

ON THE DIAGNOSTIC POTENTIAL OF Hα FOR CHROMOSPHERIC MAGNETISM L129
H. Socas-Navarro and H. Uitenbroek

A NEW STRONG-FIELD EFFECT IN SCALAR TENSOR GRAVITY: SPONTANEOUS VIOLATION OF THE ENERGY CONDITIONS L133
A. W. Whinnett and Diego F. Torres

INSTRUCTIONS TO AUTHORS OF LETTERS, AND ADDITIONAL USEFUL INFORMATION *Inside Back Cover*

INSTRUCTIONS FOR ELECTRONIC MANUSCRIPT SUBMISSION *Back Cover*